What is NUCLEONICA?

NUCLEONICA is a nuclear science web portal from the European Commission's Joint Research Centre.

Who is it for?

NUCLEONICA is aimed at professionals, academics and students in the nuclear sciences, in particular health physics and radiation protection, nuclear and radiochemistry, and astrophysics.

What can you do with NUCLEONICA?

Improve the quality of your work
Avoid the tedious task of searching for nuclear data. NUCLEONICA uses the most recently evaluated nuclear data from international datafiles.

Concentrate on the science rather than the programming!
NUCLEONICA provides you with user-friendly, reliable, and fast modules (for decay, dosimetry & shielding, range and stopping power, transport and packaging, reactor irradiation calculations, gamma-spectrum simulation etc.)

Keep informed on nuclear developments

NUCLEONICA web crawlers scan hundreds of websites on an hourly basis to bring you the latest nuclear news.

Manage all your data in a single browser-based system
The web applications are browser and operating system independent and can be accessed with Internet Explorer, Mozilla-based browsers (Mozilla, Firefox, Netscape) and a variety of other browsers such as Opera, Safari, etc.

Provides the opportunity to introduce and share your expertise
with the NucleonicaWiki – a collaborative authoring tool in nuclear science

Need to prepare a lecture or a training course?
NUCLEONICA is an ideal source of information, articles, weblinks, graphics, tables etc. Nucleonica will assist you in preparing training courses by providing an e-learning platform for education and training in the nuclear sciences.

About the Joint EC/IAEA training course

The course is aimed at persons who provide technical support (measurements, interpreting results, drawing conclusions, making recommendations) for the actions in response to environmental radioactivity and nuclear security issues. The course is suitable, for example, for physicists, radio-chemists, health physicists, technical experts etc. from the nuclear industry, nuclear research organizations, universities, regulatory authorities and nuclear medicine institutes. Completion of this course will enhance and support nuclear related decision-making as well as provide formal academic principles in nuclear science. Course requirements are a basic knowledge on physics and chemistry.

What makes this course unique is the emphasis on interactive and hands-on learning through the use of NUCLEONICA - a suite of powerful and versatile web-based applications for calculations on radio-nuclides and their radiation. With examples, exercises and dedicated case studies, a whole variety of core and topical issues in nuclear science and technology will be presented by experts in their respective fields.

The course will be held in English.

How you will benefit from this course

In this course you will:

- Consult with experts in the field
- Develop a thorough understanding of the Nucleonica Application Basics, Interaction of Radiation with Matter as well as Case Studies
- Receive direct hands-on experience with the NUCLEONICA web-based applications
- Make a short presentation of your work

Programme and Topics

Core Topics

- Nuclear Data in Nucleonica
- Nucleonica Application Basics
- Interaction of Radiation with Matter
- Case Studies with Nucleonica

The above topics will be covered by the JRC/ITU Nucleonica Team and IAEA-EL staff.

Invited Speakers (tentative)

- George P. Lasche (Sandia Labs., USA)
- Rolf Arlt (IAEA), Austria
- Andriy Berlizov (INR Ukraine)
- Mustafa Tufan (University Samsun, Turkey)

Date and Place

The Nuclear Science Training Course with NUCLEONICA will take place at the IAEA Environment Laboratories, Marine Environment Laboratories in Monaco (www.iaea.org/monaco).

The training course is organized by: **European Commission, Joint Research Centre, Institute for Transuranium Elements (ITU), Germany and the IAEA Environment Laboratories, Marine Environment Laboratories Monaco.**

Application

Only a limited number of applications can be accepted. The application form can be downloaded from the training course webpage at:
http://www.nucleonica.net:81/wiki/index.php/Help:Training_Course_Announcements
Please send us the filled-out application form by end of August 2010 latest.

Costs and Accommodation

The course fee, including lunches, coffee breaks, the banquet and teaching material, will be 75 € (to be paid at ITU/IAEA-EL). Hotel costs and location will be specified in due course. Please contact Ms. Le Normand (tel.: +377 9797 7215, email: J.Le-Normand@iaea.org).

Participants from Candidate Countries, Potential Candidate Countries, and European Neighbourhood Partner Countries

As part of its "Enlargement and Associated Initiatives" activity, the European Commission will sponsor participants from Candidate Countries (Turkey, Croatia, the former Republic of Macedonia), Potential Candidate Countries (Serbia, Montenegro, Albania and Bosnia-Herzegovina) as well as European Neighborhood Partner (ENP) Countries. The ENP covers Algeria, Armenia, Azerbaijan, Belarus, Egypt, Georgia, Israel, Jordan, Lebanon, Libya, Republic of Moldova, Morocco, the Palestinian Authority, Syria, Tunisia and Ukraine.
For such participants there is a budget available to cover travel and hotel costs. Further details can be obtained from the course secretary.
For participants from countries other than those mentioned above and which qualify for receiving IAEA Technical Cooperation support the request for training should be submitted to the IAEA through the National Liaison Officer. An advance copy of the request should be e-mailed to the IAEA Course Secretary, Ms. Julie Le Normand.

Contact details

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Organizing Committee

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nucleonica ... web driven nuclear science

Joint EC-IAEA Nuclear Science Training Course with NUCLEONICA

Monaco, 12-15th Oct. 2010

nucleonica
http://www.nucleonica.net

at the
IAEA Environment Laboratories
Marine Environment Laboratories Monaco

JRC EUROPEAN COMMISSION

IAEA.org International Atomic Energy Agency